

H0728 TMA/R31R

0052345

RECEIVED
MAR 28 2000

Thermo Retec
W.O. No. R0-02-024-7345

Bechtel Hanford Inc.
SDG H0728

EDMC

Case Narrative

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1.0 GENERAL

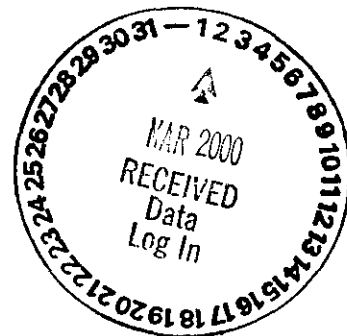
Bechtel Hanford Inc. (BHI) Sample Delivery Group H0728 is composed of one liquid (water) samples designated under SAF No. C00-002 with a Project Designation of: 200 UP1 IAM GW Sampling, October 1999.

The sample was received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the TNU Sample Receipt Checklist. The results were transmitted to BHI via facsimile on March 1, 2000.

2.0 ANALYSIS NOTES

2.2 Technetium-99 Analyses

There was contamination in the method blank. The activity was above the RDL (15 pCi/L) for Tc-99. The activity in the method blank is probably from a long-lived isotope in the tracer. No other problems were encountered during the course of the analyses.



TMA/RICHMOND

SAMPLE DELIVERY GROUP H0728

SAMPLE SUMMARY

SDG 7345

Contact Melissa C. Mannion

Client Hanford

Contract TRB-SBB-207925

Case no SDG H0728

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B0WK1	Hanford Site	WATER		R002024-01	C00-002	C00-002-17	01/26/00 08:50
Method Blank		WATER		R002024-03	C00-002		
Lab Control Sample		WATER		R002024-02	C00-002		
Duplicate (R002024-01)	Hanford Site	WATER		R002024-04	C00-002		01/26/00 08:50

SAMPLE SUMMARY

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SUMMARY DATA SECTION

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Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-CS

Version 3.06

Report date 03/01/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H0728

SDG 7345

Contact Melissa C. Mannion

QC SUMMARY

Client HanfordContract TRB-SBB-207925Case no SDG H0728

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	DEPARTMENT SAMPLE ID
7345	C00-002-17	B0WKT1	WATER				02/02/00 7	R002024-01	7345-001
		Method Blank	WATER					R002024-03	7345-003
		Lab Control Sample	WATER					R002024-02	7345-002
		Duplicate (R002024-01)	WATER				02/02/00 7	R002024-04	7345-004

QC SUMMARY

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SUMMARY DATA SECTION

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Lab id TMANCProtocol HanfordVersion Ver 1.0Form DVD-QSVersion 3.06Report date 03/01/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H0728

SDG 7345

Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client HanfordContract TRB-SBB-207925Case no SDG H0728

TEST	MATRIX	METHOD	PREPARATION ERROR BATCH	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALI- FIERS
Beta Counting												
TC	WATER	Technetium 99 in Water	6914-075	10.0	1			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

PREP BATCH SUMMARY

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SUMMARY DATA SECTION

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Lab id TMANCProtocol HanfordVersion Ver 1.0Form DVD-PBSVersion 3.06Report date 03/01/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H0728

WORK SUMMARY

SDG 7345

Contact Melissa C. Mannion

Client Hanford

Contract TRB-SBB-207925

Case no SDG H0728

CLIENT SAMPLE ID		LAB SAMPLE ID									
LOCATION	MATRIX	COLLECTED		SUF-							
CUSTODY	SAF No	RECEIVED	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD		
BOWKT1		R002024-01	7345-001	TC		02/22/00	03/01/00	MCM	Technetium 99 in Water		
Hanford Site	WATER	01/26/00									
C00-002-17	C00-002	02/02/00									
Method Blank		R002024-03	7345-003	TC		02/24/00	03/01/00	MCM	Technetium 99 in Water		
	WATER										
	C00-002										
Lab Control Sample		R002024-02	7345-002	TC		02/22/00	03/01/00	MCM	Technetium 99 in Water		
	WATER										
	C00-002										
Duplicate (R002024-01)		R002024-04	7345-004	TC		02/22/00	03/01/00	MCM	Technetium 99 in Water		
Hanford Site	WATER	01/26/00									
	C00-002	02/02/00									

COUNTS OF TESTS BY SAMPLE TYPE											
TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
TC	C00-002	Technetium 99 in Water	TC99TRLSC	1			1	1	1		4
TOTALS				1			1	1	1		4

WORK SUMMARY

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SUMMARY DATA SECTION

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Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-CWS

Version 3.06

Report date 03/01/00

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0728

R002024-03

Method Blank

METHOD BLANK

SDG <u>7345</u>	Client/Case no <u>Hanford</u>	SDG <u>H0728</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>TRB-SBB-207925</u>	
Lab sample id <u>R002024-03</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7345-003</u>	Material/Matrix <u>WATER</u>	
	SAF No <u>C00-002</u>	

ANALYTE	CAS NO	RESULT pCi/L	2 σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Technetium 99	14133-76-7	<u>31.2</u>	6.0	12	15		TC

200-UP1-IAM GW Monitoring, Oct. 1999

QC-BLANK #33370

TMA/RICHMOND
SAMPLE DELIVERY GROUP H0728

R002024-02

Lab Control Sample

LAB CONTROL SAMPLE

SDG <u>7345</u> Contact <u>Melissa C. Mannion</u> Lab sample id <u>R002024-02</u> Dept sample id <u>7345-002</u>	Client/Case no <u>Hanford</u> SDG <u>R0728</u> Case no <u>TRB-SBB-207925</u> Client sample id <u>Lab Control Sample</u> Material/Matrix <u>WATER</u> SAF No <u>C00-002</u>
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ANALYTE	RESULT	2σ ERR	MDA	RDL	QUALI-	ADDED	2σ ERR	REC	3σ LMTS	PROTOCOL
	pCi/L	(COUNT)	pCi/L	pCi/L	FIERS TEST	pCi/L	pCi/L	%	(TOTAL)	LIMITS
Technetium 99	1110	42	<u>17</u>	15	B TC	1090	44	102	83-117	80-120

200-UP1-IAM GW Monitoring, Oct. 1999

QC-LCS #33369

Lab id TMANC
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LCS
 Version 3.06
 Report date 03/01/00

TMA/RICHMOND
SAMPLE DELIVERY GROUP H0728

R002024-04

B0WKT1

DUPLICATE

SDG <u>7345</u>	Client/Case no <u>Hanford</u>	SDG <u>H0728</u>
Contact <u>Melissa C. Mannion</u>	Case no <u>TRB-SBB-207925</u>	
DUPLICATE	ORIGINAL	
Lab sample id <u>R002024-04</u>	Lab sample id <u>R002024-01</u>	Client sample id <u>B0WKT1</u>
Dept sample id <u>7345-004</u>	Dept sample id <u>7345-001</u>	Location/Matrix <u>Hanford Site</u> <u>WATER</u>
	Received <u>02/02/00</u>	Collected <u>01/26/00 08:50</u>
		Custody/SAF No <u>C00-002-17</u> <u>C00-002</u>

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	PROT LIMIT
Technetium 99	738	28	12	15	B	TC	728	31	17	B	1	23	

200-UP1-IAM GW Monitoring, Oct. 1999

QC-DUP#1 33371

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/01/00</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0728

R002024-01

B0WKT1

DATA SHEET

SDG <u>7345</u>	Client/Case no <u>Hanford</u>	SDG <u>H0728</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>TRB-SBB-207925</u>	
Lab sample id <u>R002024-01</u>	Client sample id <u>B0WKT1</u>	
Dept sample id <u>7345-001</u>	Location/Matrix <u>Hanford Site</u>	<u>WATER</u>
Received <u>02/02/00</u>	Collected <u>01/26/00 08:50</u>	
	Custody/SAF No <u>C00-002-17</u>	<u>C00-002</u>

ANALYTE	CAS NO	RESULT pCi/L	2 σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Technetium 99	14133-76-7	728	31	<u>17</u>	15	B	TC

200-UP1-IAM GW Monitoring, Oct. 1999

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/01/00</u>

TMA/RICHMOND

SAMPLE DELIVERY GROUP H0728

Test TC Matrix WATER
SDG 7345
Contact Melissa C. Mannion

METHOD SUMMARY

TECHNETIUM 99 IN WATER
BETA COUNTING

Client Hanford
Contract TRB-SBB-207925
Contract SDG H0728

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- PLANCHET	Technetium 99
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Preparation batch 6914-075

BOWKT1	R002024-01	7345-001	728
BLK (QC ID=33370)	R002024-03	7345-003	<u>31.2</u>
LCS (QC ID=33369)	R002024-02	7345-002	ok
Duplicate (R002024-01)	R002024-04	7345-004	ok

Nominal values and limits from method RDLs (pCi/L) 15
200-UP1-IAM GW Monitoring, Oct. 1999

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- pCi/L	MDA	ALIQ L	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- YZED	DETECTOR
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Preparation batch 6914-075 2σ prep error 10.0 % Reference Lab Notebook 6914 pg. 75

BOWKT1	R002024-01	<u>17</u>	0.0500	42	101	27	02/17/00	02/22	GRB-202
BLK (QC ID=33370)	R002024-03	12	0.0500	48	137	02/17/00	02/24	GRB-220	
LCS (QC ID=33369)	R002024-02	<u>17</u>	0.0500	41	101	02/17/00	02/22	GRB-203	
Duplicate (R002024-01) (QC ID=33371)	R002024-04	12	0.0500	61	101	27	02/17/00	02/22	GRB-221

Nominal values and limits from method 15 0.0500 20-105 50 180

PROCEDURES	REFERENCE	TC99TRLSC
EP-020	Sample Leach For Technetium-99, rev 0	
EP-540	Technetium-99 Purification, rev 0	

AVERAGES ± 2 SD	MDA <u>14</u> ± <u>5.8</u>
FOR 4 SAMPLES	YIELD <u>48</u> ± <u>18</u>

METHOD SUMMARIES

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SUMMARY DATA SECTION

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Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 03/01/00

[illegible]

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: Bechtel Hanford (PNNL) Date/Time received 2-2-00 9:15
 CoC No. C00-002-17, C00-010-2, C00-010-6, C00-011-5, C00-011-21, C00-011-23
 Container I.D. No. GWS-132 Requested TAT (Days) 45 P.O. Received Yes [] No [☒]

INSPECTION

1. Custody seals on shipping container intact? Yes [☒] No [] N/A []
2. Custody seals on shipping container dated & signed? Yes [☒] No [] N/A []
3. Custody seals on sample containers intact? Yes [☒] No [] N/A []
4. Custody seals on sample containers dated & signed? Yes [☒] No [] N/A []
5. Cooler Temperature: _____ Packing material is: Wet [] Dry [☒]
6. Number of samples in shipping container: 6
7. Number of containers per sample: _____ (Or see CoC 2)
8. Paperwork agrees with samples? Yes [☒] No []
9. Samples have: Tape [☒] Hazard labels [] Rad labels [] Appropriate sample labels [☒]
10. Samples are: In good condition [☒] Leaking [] Broken Container [] Missing []
11. Describe any anomalies: No collection time on the sample labels for samples BDX 646, BDX 658

13. Was P.M. notified of any anomalies? Yes [☒] No [] Date 2-2-00
14. Received by J. Corrao Date: 2-2-00 Time: 9:15

LOGIN

TNU W.O. No. _____ Group No. _____ Client W.O. No. _____

PROGRAM MANAGER

Sample holding times exceeded? Yes [] No [☒]

Client Notified: Name _____ Date/time _____